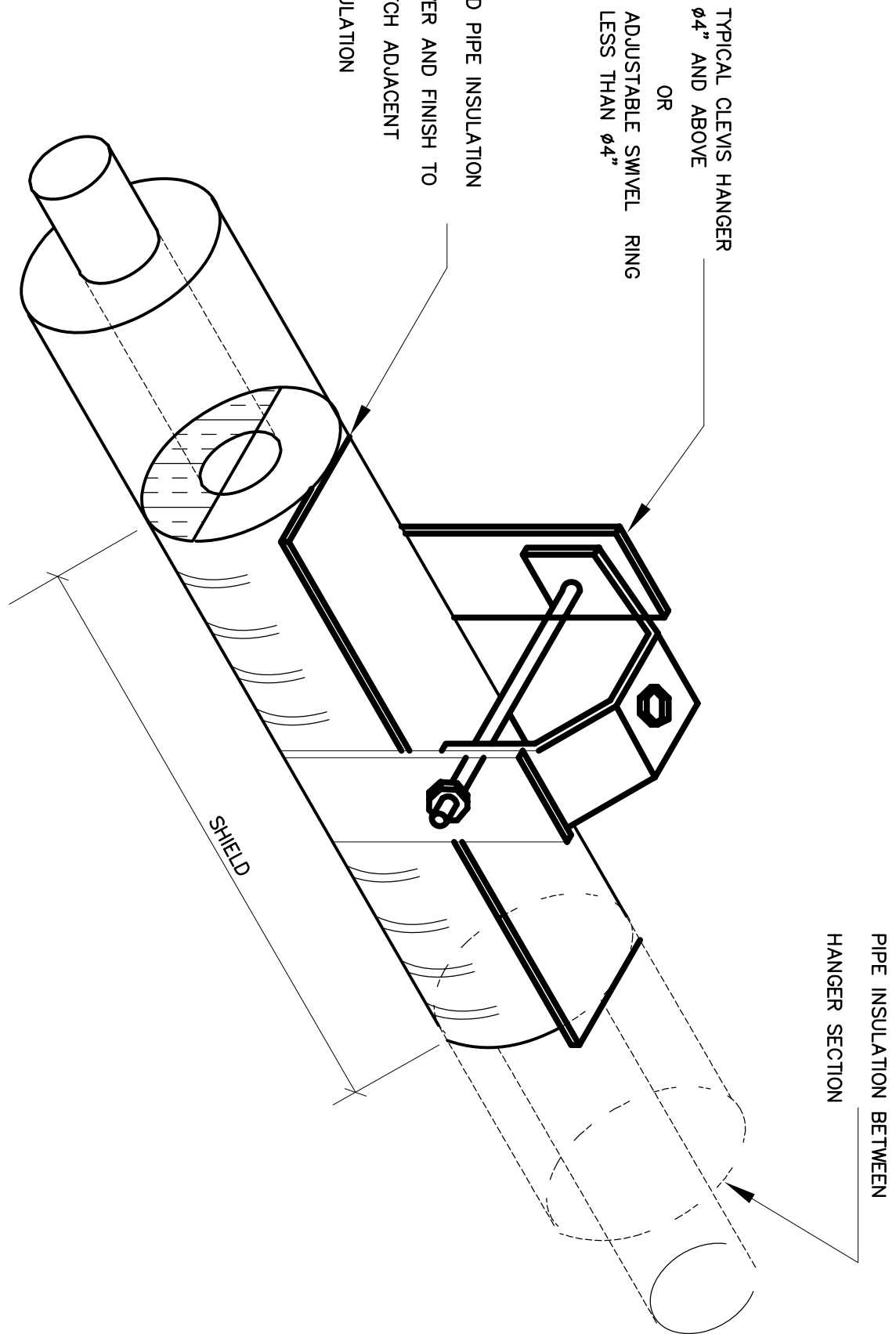
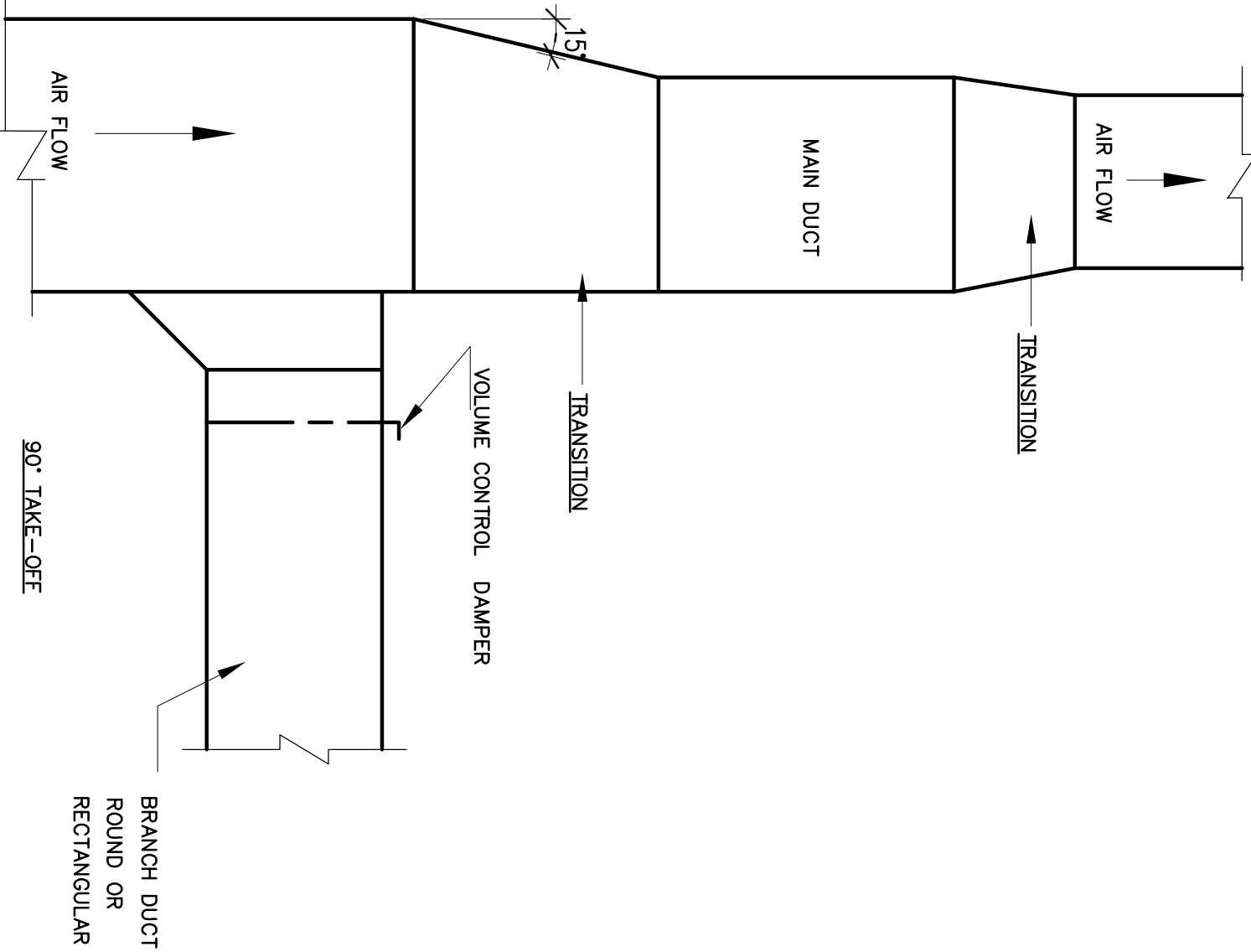
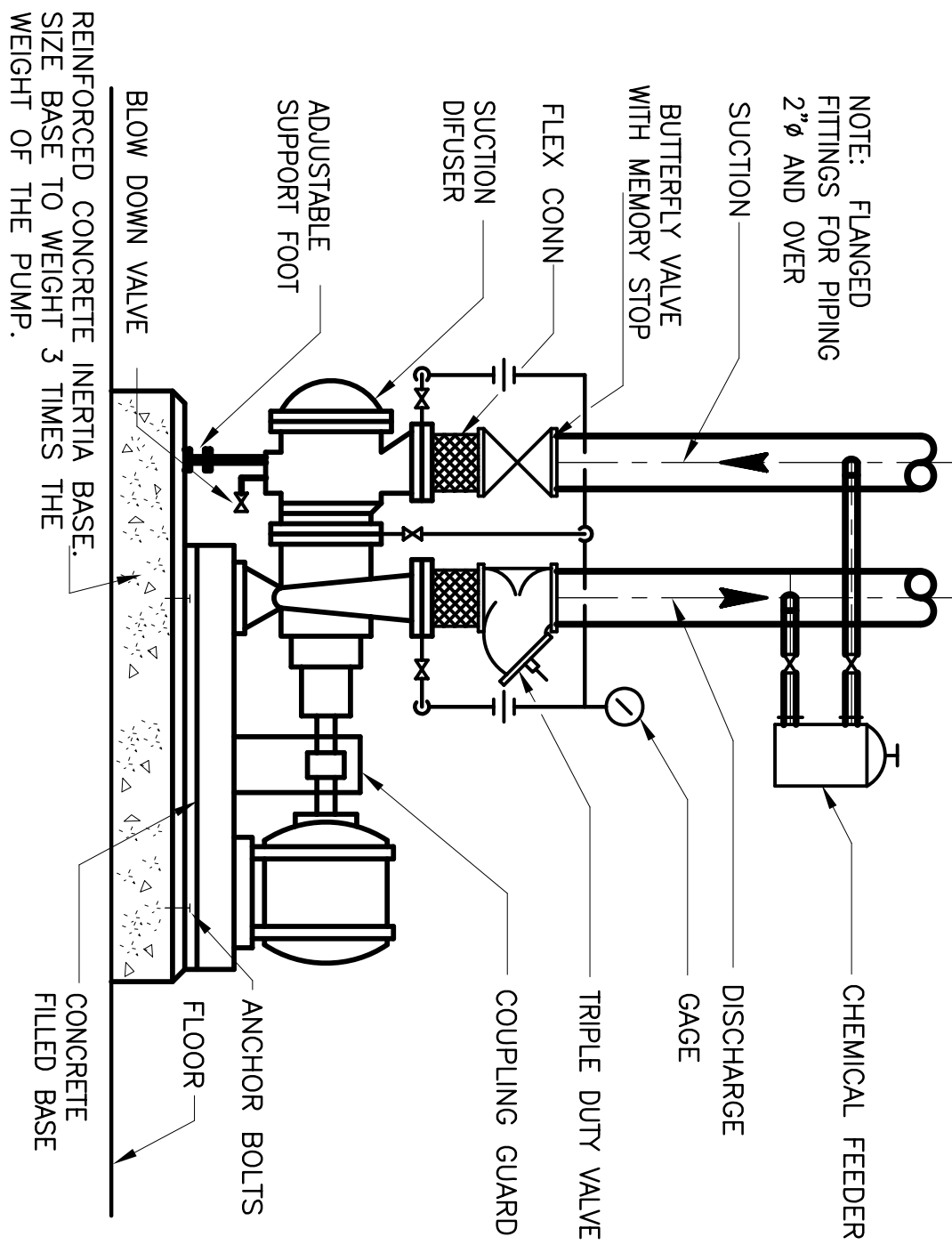


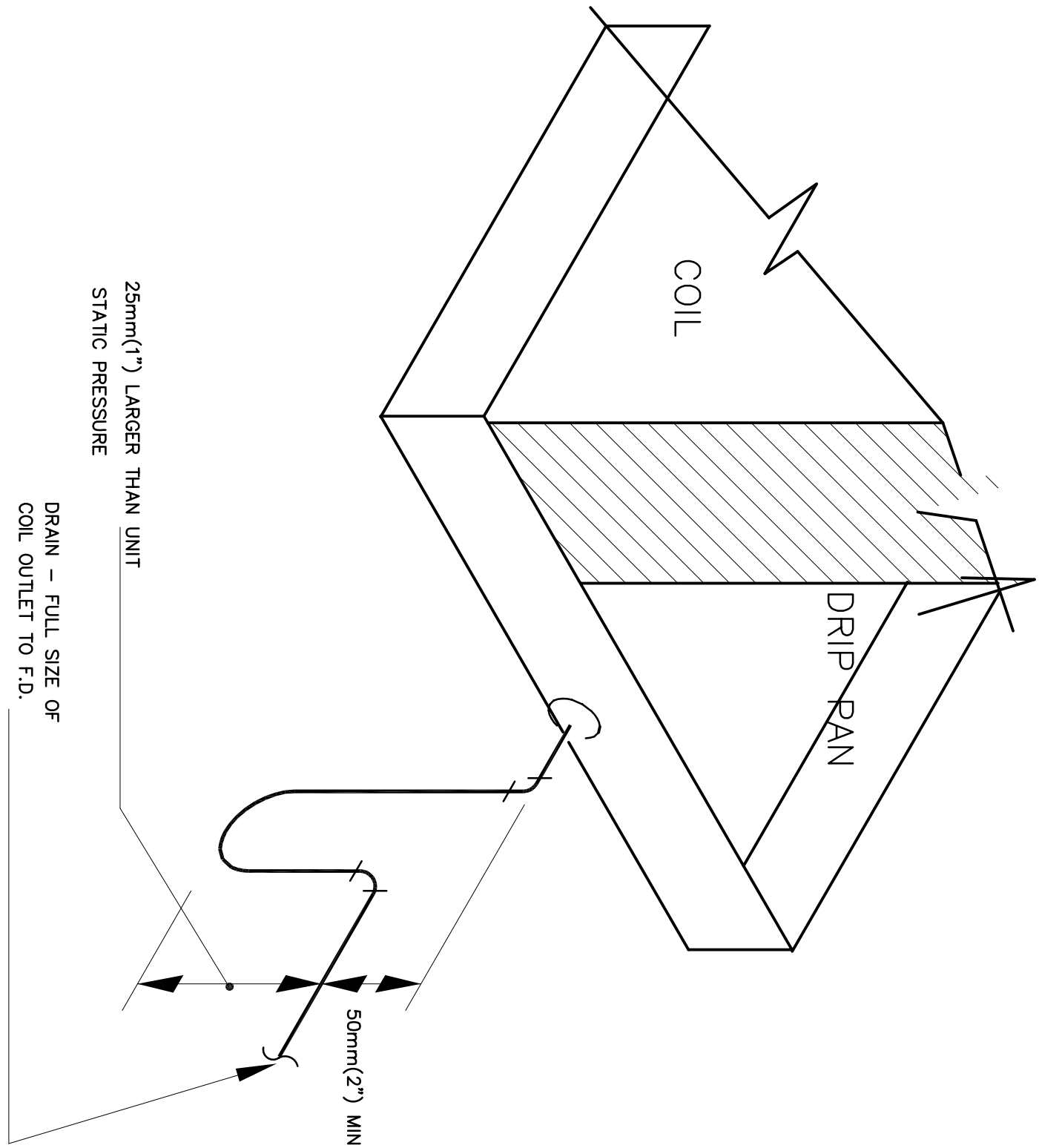
REFRIGERANT PIPING DETAILS



INSULATED PIPE HANGER DETAILS



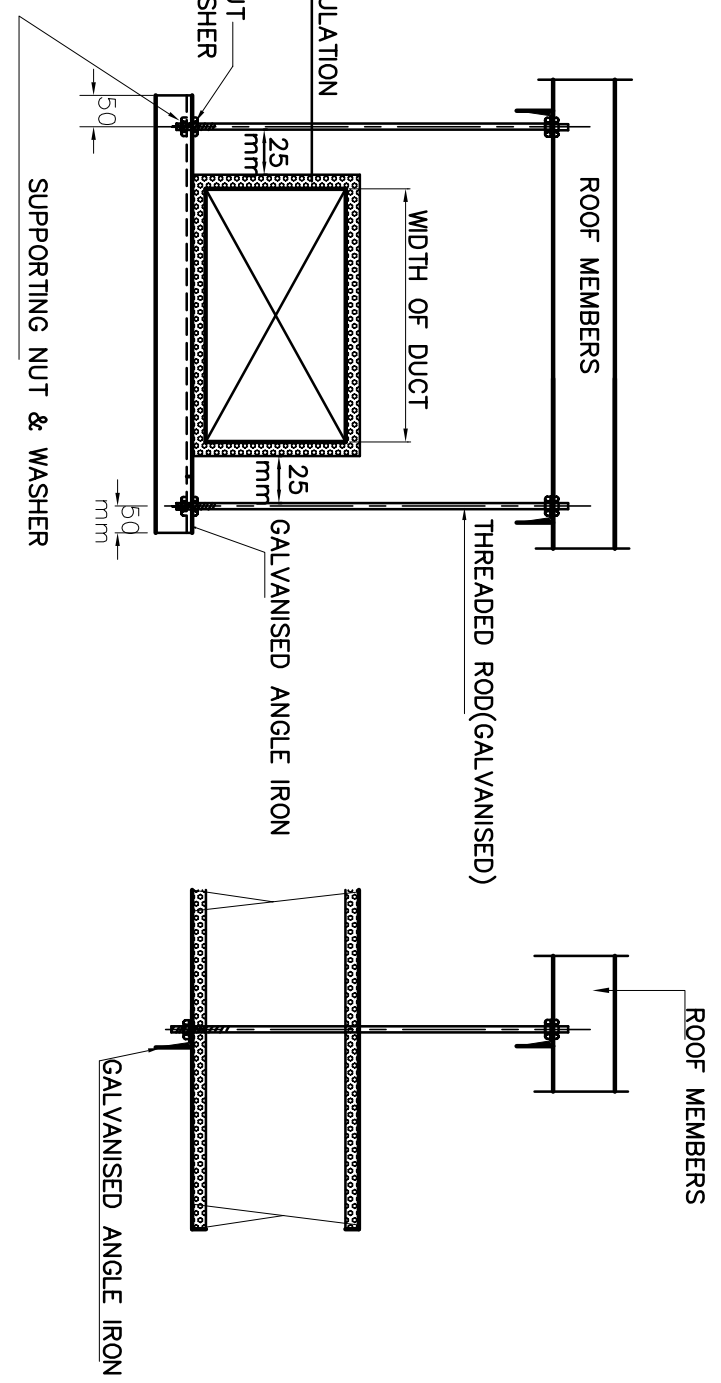
BRANCH DUCT DETAILS



TRAPEZE HANGER DETAIL FOR HORIZONTAL RUNS OF DUCTS

S.NO	DUCT LONGEST DIMENSION	TRAPEZE ANGLE SIZE	DROP ROD SIZE (DA)	MAXIMUM SPACING
1	UP TO 18" (UP TO 460mm)	25mmx25mmx3mm (1 x 1 x 1/8")	8 mm	3000 mm (10')
2	19" - 30" (480 - 760mm)	25mmx25mmx3mm (1 x 1 x 1/8")	8 mm	3000 mm (10')
3	31" - 42" (790 - 1065mm)	40mmx40mmx3mm (1 1/2 x 1 1/2 x 1/8")	10 mm	3000 mm (10')
4	43" - 60" (1090 - 1525mm)	40mmx40mmx3mm (1 1/2 x 1 1/2 x 1/8")	10 mm	3000 mm (10')
5	61" - 84" (1550 - 2135mm)	50mmx50mmx3mm (2 x 2 x 1/8")	12 mm	2440 mm (8')
6	85" - 95" (2160 - 2440mm)	50mmx50mmx3mm (2 x 2 x 3/16")	12 mm	2440 mm (8')
7	OVER 97"(2465mm)	50mmx50mmx3mm (2 x 2 x 1/4")	12 mm	2440 mm (8')

RECTANGULAR DUCT HANGER DETAILS



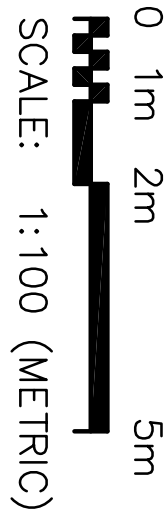
LEGEND

AIR DISTRIBUTION		PIPING	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	DUCTWORK		DIRECTION OF FLOW
	DROP IN DUCT ELEVATION		ECCENTRIC REDUCER OR INCREASER
	RISE IN DUCT ELEVATION		CONCENTRIC REDUCER OR INCREASER
	VOLUME DAMPER (VD)		GATE VALVE
	SUPPLY CEILING DIFFUSER (CD)		GLOBE VALVE
	SUPPLY SIDEWALL REGISTER (SR)		BUTTERFLY VALVE
	TRANSFER GRILLE		BALL VALVE
	SUPPLY REGISTER		CIRCUIT BALANCING VALVE
	RETURN REGISTER		LEFT CHECK VALVE
	ACCESS DOOR (AD)/ACCESS PANEL (AP)		SWING CHECK VALVE
	WANED ELBOW		AUTOMATIC CONTROL VALVE (2-WAY)
	NON-WANED ELBOW		AUTOMATIC CONTROL VALVE (3-WAY)
	FLEXIBLE CONNECTION (FC)		STRAINER
	BRANCH DUCT TAKE-OFF (BDO)		PIPE RISING UP
	DUCT TEE		PIPE DROPPING DOWN
	DUCT UP		UNION - SCREWED OR FLANGED
	DUCT DOWN		GAUGE W/GAUGE COCK AND SUBMERG (WATER)
	UNDERCUT DOOR (RECTANGULAR)		THERMOMETER
	FIRE DAMPER F.D.		FLEXIBLE CONNECTION
	SMOKE DETECTOR		
	FRESH AIR		
	WIRE MESH SCREEN		
	CUBIC FEET PER MINUTE		
	OUTSIDE AIR INTAKE		

AS BUILT

11-03-04

GRAPHIC SCALE:

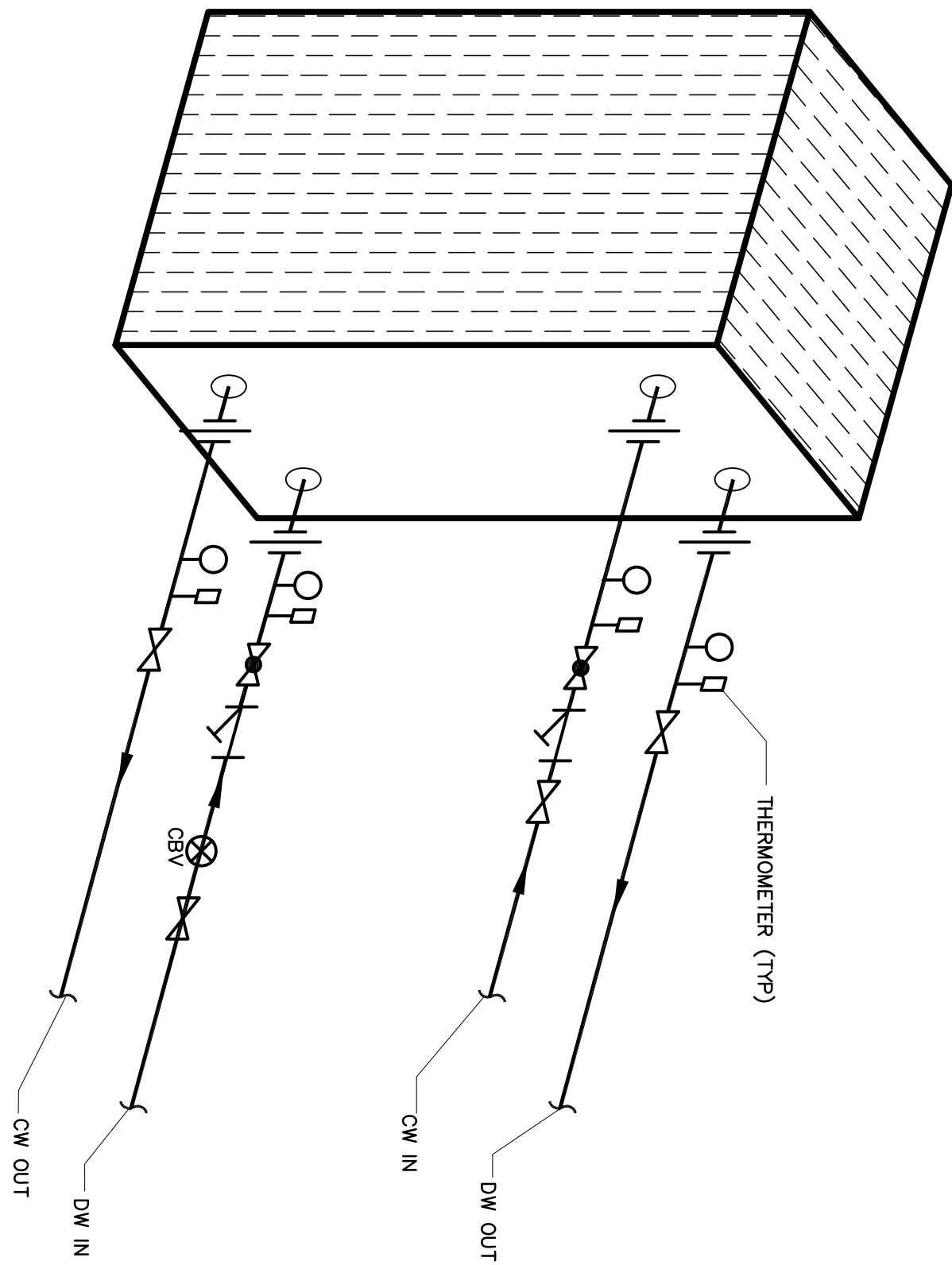


SEAL.

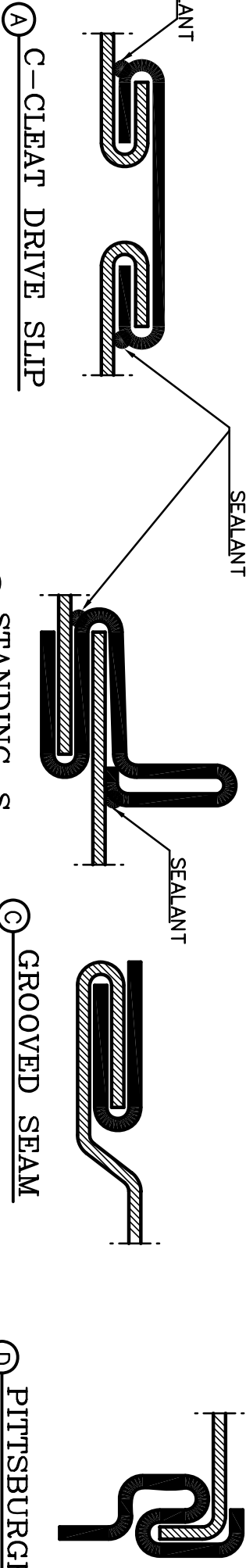
CHECKED BY: AFA	SUB-CONT:
APPROVED BY: VMS	Bader Alkhalifa & Brothers Co., L.L.C. (Engineering Group)
	P.O. Box No.177, SAFAT KUWAIT Tel. 4815077; FAX: 4839725

DRAWN BY: ASJ	DATE: 3/7/03	
CHK. BY: AFA	3/7/03	
ENGR. AFA		

PROJECT: SHORTWAVE EXPANSION PROJECT	TITLE: H.V.A.C. STANDARD DETAILS -I
PROJ. MANAGER:	DWG. ABD-AC-01
IOC No.:	No. NTS
TASK No.:	SCALE: N.T.S
PROJ. No. 03NCO80	SHEET OF
CAD DESIGN FILE NAME: M-501M05.DWG.	CAD FILE: F:\M05\05\VOFA\MC-01



FRAME & PLATE HEAT EXCHANGER



SLIP DRIVE JOINT DETAILS

